

PRINTED CIRCUIT

March 1999

Newsletter of the Joplin Amateur Radio Club

Vol. 9 Issue No. 3

KING HUSSEIN JY1, SK PASSES

Radio amateurs around the world joined in mourning the recent death of Jordan's King Hussein, JY1. Hussein, 63, died February 7. The Middle East's longest-reigning ruler, he'd been Jordan's king for 47 years, taking the throne when he was just a teenager. His son, Abdullah, 37, succeeds him.

Hussein had earned a reputation as a catalyst for peace and as a conciliator in the Middle East. President Clinton was among the heads of state from around the globe who gathered in Jordan February 8 for Hussein's funeral.

Hussein had been active in recent months from the US while seeking cancer treatment at Minnesota's Mayo Clinic. A QSO with JY1 was considered by many hams to be both an honor and a privilege. His elegant QSL card was prized.

Hussein was a life member of the ARRL. ARRL Executive Vice President David Sumner, K1ZZ, called him "an enthusiastic radio amateur whose support was invaluable to us in obtaining new amateur bands at the 1979 World Administrative Radio Conference." Sumner recalled that in May 1979, International Amateur Radio Union President Noel Eaton, VE3CJ, was invited to Amman to meet with King Hussein.

"Jordan's support of the Amateur Service was much in evidence at the conference that fall, and was a crucial element in our success," Sumner said. The WARC-79

(Continued on page 3)

FCC SHUTS DOWN TROUBLESOME BAY AREA REPEATER

The FCC has shut down for 120 days the K7IJ repeater facility on Grizzly Peak in the San Francisco Bay area and told the licensee his ham ticket could be in jeopardy. The FCC took the action by modifying K7IJ's license to prohibit repeater operation starting midnight February 28, 1999. The repeater operates on 145.29, 223.78, 440.175, and 441.175 MHz. The FCC also set aside recent license grants of four individuals accused of unlicensed operation on the repeater prior to obtaining their amateur tickets and other behavior. The cases, the first major VHF/UHF enforcement actions the FCC has taken in recent months, were brought to the Commission's attention by the Amateur Auxiliary.

The FCC's Riley Hollingsworth, K4ZDH, said that for almost a year, the repeater's control operator, identified as Blake B. Jenkins, N6YSA, of Berkeley, California, "has apparently not only allowed, but encouraged, use of the repeater by unlicensed operators, rebroadcast of cordless telephone calls, playing of music, and profanity and obscenity." He said extended QSOs have taken place between the control operator and unlicensed stations.

Hollingsworth said the situation was brought to the attention of the licensee, Bruce Wachtell of Carson City, Nevada, but nothing was done. "Such operations are not only contrary to the Amateur Radio Service rules and frequency allocations,

(Continued on page 4)

HAMS STILL ON HOLD FOR ULS

While the FCC's Wireless Telecommunications Bureau began using the Universal Licensing System (ULS) February 16, hams remain in a holding pattern on ULS until the FCC establishes a ULS Amateur Service database. That's not expected to happen until later this year. This means that hams still must use Form 610 and its variations. These so-called "pre-ULS forms" are valid until further notice. On-line services are limited to Form 900 renewals within 120 days of expiration and Form 610V vanity call sign application. License modifications are not

**The ULS is a
new, interactive
database...**

yet available on-line unless done at the same time as a renewal.

The ULS is a new, interactive licensing database that consolidates and replaces 11 existing databases and licensing systems, including the Amateur Service. Among other things, it will replace the venerable FCC Form 610 series with a new Form 605 and provide on-line filing, modification, and renewal for amateurs.

In January, the ARRL petitioned the FCC for minor alterations to the ULS rules. The League said it wants the FCC to continue

(Continued on page 3)

inside...

Rhode Island QSO

The World of VHF/UHF

ARES Trains for Damage Assessment

Page 2

Page 3

Page 4

SOLAR UPDATE

Solar savant Tad Cook, K7VVV, Seattle, Washington, reports: Solar activity was down this week, but so were geomagnetic disturbances after a rough start. On February 18 the Planetary A index was 54, the Boulder A index was 41, and the high latitude A index was 89. February 19 wasn't much better, but on February 20 and 21y geomagnetic activity was very low, with K indices at all latitudes at zero during many periods.

Average solar flux was down about 45 points from last week to this week, and average sunspot numbers were off about 65 points. Solar flux should continue to decline, with predicted flux values for this weekend, February 26-28, at 120, 118 and 115, and planetary A indices at 8, 8 and 10. Solar flux is expected to bottom out around 105 from March 3-5, then rise to 130 by March 8, 160 by March 10, and peak around 200 on March 13. After that it is expected to decline to 120 around March 22. This is all based on the previous solar rotation, so new activity could increase these numbers with little warning. During that period geomagnetic conditions are expected to be unsettled around March 5 and 6, more so on March 11, and especially on March 16-18, about 28 days or one solar rotation since the last big disturbance.

Sunspot numbers for February 18 through 24 were 135, 122, 118, 103, 108, 38 and 56 with a mean of 97.1. The 10.7-cm flux was 168.1, 164.2, 157.1, 147.2, 129.7, 127 and 119.8, with a mean of 144.7, and estimated planetary A indices were 54, 38, 5, 5, 4, 7 and 11, with a mean of 17.7.

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- THE ARRL LETTER VOL 18, NO. 9, FEBRUARY 26, 1999.

THE HAMFEST COMMITTEE NEEDS YOUR HELP

**CONTACT HAL 782-8014
OR LARRY 781-7955**

Rhode Island QSO - It's easy with 250 mW

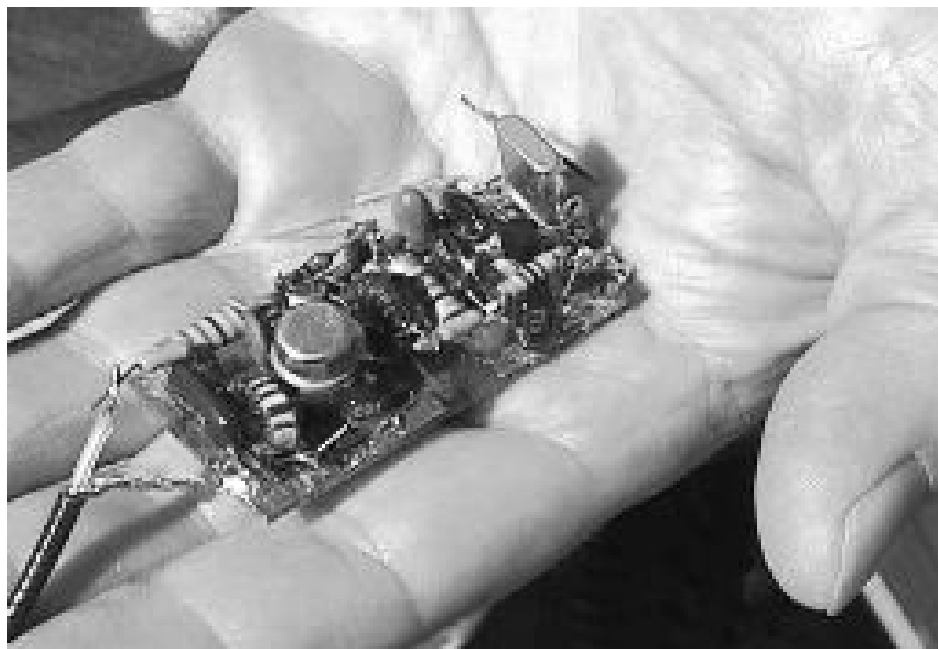
BY JAY RUPAR KØETC

I have been intrigued by John's (WØJRP) reports of stations he has worked using QRP. Operating QRP, usually means less than 10 watts PEP on SSB, and less than 5 watts on CW.

I have been a ham for 42 years but had

think that Ham Radio is a handi-talkie and a 2 meter repeater then you are missing out on a huge number of interesting and challenging opportunities.

If you think you would like to try your hand at building and experiencing the operation of a QRP rig like the one



never worked QRP before. Since John had worked a lot of his QRP with a home brew transmitter putting out about 2 or 3 watts, I decided to build a transmitter as small as I could make it, and still talk to someone.

When I built the transmitter shown here, I was shooting for an output of 1 watt, out but all I could get was 250 milliwatts. So I put up a 30 meter dipole and hooked the 250 milliwatt transmitter to it.

AMAZING! In 3 days I worked 17 states with it. Now I have 22 states! The QSL cards are flooding in. They say things like "Can't believe 250 mW"--- "Great signal for only 250 mW"---"Super job for a quarter watt".

Ham Radio is an umbrella hobby that has dozens of sub-hobbies, each one being a separate and wonderful pursuit. If you

shown, contact me. Both John and I are willing to help anyone build a QRP rig.

The night I finished my QRP rig, I yelled "YES!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" My girlfriend came running into the room and asked what happened?

I said "I just worked Rhode Island." She said "That isn't a big deal is it?" I replied "Yes it is, because I was using this 250 milliwatt transmitter that I built out of junk for nothing."

Then she said "How much did all this other stuff on your desk cost?" I said "Well er um uh about \$5000." She said "So you are having more fun with some junk you built than you are with the \$5000 worth of equipment you bought?"

I said "Well, uh um er yeah!" ¶

CLUB HAPPENINGS

QRP PROGRAM SCHEDULED IN MARCH

March 23rd, the JARC will be privileged to have Kelly Ellison, WBØWQS, and some QRP friends, provide an introductory tutorial of all aspects of QRP. Topics will include operation, antennas, equipment construction, and purchase. A question and answer session will follow.

Kelly, originally from Denver, was first licensed when he was 13. He presently manages KSWM radio in Aurora, and is a member of the ARCI QRP Organization.

(Continued from page 1)

resulted in Amateur Radio's gaining the 30, 17, and 12-meter bands. That same year, JY1 was featured in the film, "The World of Amateur Radio." Hussein regarded his 1983 contact with Owen Garriott, W5LFL, on board the Space Shuttle Columbia, as a high point in his Amateur Radio activity.

King Hussein also participated in the historic 1995 joint Israel-Jordan JY74X operation on Mt Nebo, where hams from both countries participated in a Field Day-like operation. The King put in appearances both on the air and in person, much to the delight of the participants and those waiting to work him and JY74X.

Hussein's friend Bruce "Blackie" Blackburn, W4TA/JY9BB, of St Petersburg, Florida, called him "one of the world's most respected amateurs" and recounted many stories about King Hussein as a person and an avid Amateur Radio operator. Blackburn said King Hussein "promoted Amateur Radio to the hilt in Jordan" and saw to it that Amateur Radio classes were instituted in elementary schools. King Hussein also dropped in on meetings of the Royal Jordanian Radio Amateur Society in Amman. King Hussein also was involved with the early satellite experiments.

(Continued on page 5)

CLUB'S SPAGHETTI DINNER - A SUCCESS

The JARC sponsored a free Spaghetti Dinner on Tuesday February 23rd which preempted the regular 2nd monthly meeting. Our host was Cherylann Dannelley, she was responsible for coordinating the event. The dinner was attended by over 40 people including the children.

In addition to the homemade spaghetti, meatballs and sauce, Aida Huber made an unexpected entrance with homemade eggrolls. Yum Yum! Additional items served were a salad, garlic toast, mixed vegetables, and Jim Johannes's (NØZSQ) special Green Bean Casserole. There were several different deserts available for those who had a bit more room. Refreshments were served.

Cheryl then led the group in an anagram game which was won by Mark Sullivan KBØVVQ. The evening of fun and food concluded with a drawing for a doorprize that was given to Mary Anne Phillips.

I hope I don't leave anyone out, but many thanks to those who made the event a success, especially to Betty Miller, Sue Linthicum, Mary Anne Phillips, and of course our hosts Cherylann and Hal Dannelley. ¶

(Continued from page 1)

to issue paper license documents; to come up with a way for applicants not having a Taxpayer Identification Number--typically a Social Security Number--to meet ULS requirements to provide one; and to include on Form 605 a section for Volunteer Examiners to certify that an applicant has met the requirements for a new or upgraded ham ticket.

The FCC subsequently did make provisions to assign TINs to those doing business with the Commission who have no legal way to obtain one. The "assigned" TINs will consist of the letter "A" followed

(Continued on page 5)

THE WORLD OF VHF/UHF

BY JOHN TUDENHAM WØJRP

In this part of the world, February has been a poor month for VHF DX propagation. In the southern, western, and part of the eastern US a few DX openings have occurred on six meters. N5JHV and NØIPL both in NM, have reported a few openings to New Zealand and Australia. Several southern CA stations reported the same, also several south TX stations reported openings to South America. On Feb 27th several stations in MD and DE along the Atlantic seaboard reported openings to Brazil. This was believed to be caused by a Sporadic-E to F-layer link as the solar flux numbers that day were much too low to support direct F-layer skip from that far north of latitude.

Local news: The 52.525MHz Thursday night FM net continues to grow with more new stations checking in. KCØAUY now has a 100 watt Motorola 6 meter FM rig installed in his car. It puts out a nice signal.

Don Hilliard WØPW who has one of the best VHF/UHF/ and Microwave weak signal stations in the area, is back home after a stay in the hospital and doing well. Don works everything up to 3GHz. He nows plans to get on six meters. He usually refers to six meters as a HF band. When compared to 3GHz, I guess it is.

CQ Magazine is trying to promote some VHF activity by introducing Spring Activity Weekends. The first one is VHF FM activity weekend March 19-21, followed by SSB and CW weekend April 23-25. This is being done to try to give ham radio a shot in the arm. As many of you probably know, ham activity has been on the decline during the last year on all frequencies. Turn that computer off once in a while and get on the air. I need to also!

(JOHN IS A REGULAR CONTRIBUTOR TO THE "PRINTED CIRCUIT" WITH HIS WORLD OF VHF/UHF COLUMN, OBVIOUSLY WORKING ON ARTICLES BETWEEN ALL THOSE CONTACTS. HOWEVER, CONTRARY TO HIS COMMENT, I'D LIKE TO NOTE THAT WE APPRECIATE THE TIME HE SPENDS ON HIS COMPUTER, HE SENT THIS TO ME BY E-MAIL. - ED)

USE OF MORSE CODE FEATURED ON NPR'S TALK OF THE NATION

The continuing use of Morse code among the Amateur Radio community as CW is phased out for maritime use was featured on National Public Radio's **Talk of the Nation, Science Friday**. The ARRL's Jennifer Hagy, N1TDY, worked with NPR staff to secure interviewee Les Kalmus, W2LK, for the live, half-hour talk show. Members who heard the show report that Amateur Radio was shown in a very positive light and that callers interested in getting their ham radio licenses were referred to the ARRL. The program is available via RealAudio at <http://programs.npr.org/archives/totn/scifri.cfm>

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- THE ARRL LETTER VOL 18, No. 7, FEBRUARY 12, 1999.

(Continued from page 1)

but degrade the service for legitimate radio licensees as well," Hollingsworth said in a certified letter to Wachtell February 25. "The operation of the K7IJ repeater system in this manner may reflect adversely upon your qualifications to hold a Commission license."

Hollingsworth said Jenkins' "actions and omissions" while control operator were under separate FCC review, along with those of the secondary control op, Steven R. Rossi, KE6LNH, of Novato, CA. The FCC set aside the recent license grants or upgrades of James C. Walker, KF6VAA; Gordon B. Reese III, KF6QKA; Michael J. Nichols, KF6UAS; and Eric B. Shuler, KF6BMG (ex-KF6UJU) pending further investigation. The FCC has permitted Reese, who just upgraded to Tech Plus, to retain his Technician operating privileges while its investigation continues.

The FCC also warned Mervyn Ehambrave of East Palo Alto, California, about unlicensed operation on the K7IJ repeater, and warned Timmy O Sheen Sr, N6MZA, about behavior including "jamming and rebroadcasts of cordless phones" on the repeater, Hollingsworth said.

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WHAT MAY BE CAUSING THE SITE NOISE KFØTD offers an analysis

Here is a probable formula for the problem that our repeater has been experiencing with noise and reduced sensitivity.

Any number of things can cause mixing of signals resulting in a combination that can cause interference. As an example, a tarnished or loose mechanical connection on the tower could act as a diode mixer. If signals of sufficient magnitude are present, then the condition exists for producing an interfering signal source. However, physically locating this new source could be a nightmare.

For the mixer to work, a combination of frequencies must be defined. This is not an easy task when you have so many signals available at or near the site. The combination listed here offers a possible solution.

$$157.740 \text{ MHz} + 92.500 \text{ MHz} - 102.500 \text{ MHz} = 147.740 \text{ MHz}$$

This frequency is 70kc away from the center of our repeater's input frequency 147.810 MHz.

A commercial FM station uses wide-band modulation limits of 175kc, so we are within the limits of the signal. The 157.740 MHz is a paging transmitter which is located on the same tower as us, and the FM stations are just down the block.

When I was at the site, I saw the noise on a service monitor that one of the Techs from Western Communications had hooked up to our system. It was about the width of an FM broadcast signal. The noise was observed if the pager was on, then went away when the pager went off. Good luck to anyone trying to find out just exactly where it is mixing.

Western Communication is aware of the problem, and the noise is less than it has

ARES TRAINS FOR DAMAGE ASSESSMENT

The regular meeting of the local ARES chapter was held Saturday Feb 13th. The group at Smitty's was probably small, due to the fact that a lot of us were involved in training for Damage Assessment at the Red Cross. A few more showed up at the last minute, still others came from other chapters of the Red Cross.

The Red Cross class was well attended, 15 in all. About 97% were hams, three were wives of hams and one of the wives, was a ham herself.

Most of the class was spent watching videos and listening to the instructor. It was then followed by some discussion. All course material was furnished so that all we needed to bring was ourselves, and the eagerness to observe.

During the lunch break, some of those that were there already were asking "Where do we go from here?" That is the topic of the next ARES meeting to be held the fourth Saturday in February at 1PM. Location: Red Cross building, 4th & Jackson, Joplin MO.

All ARES Meetings meet the same weeks as the JARC, on the 2nd Thursday at 7:30 PM, and the fourth Saturday at 1 PM.

For further information about how you can become a part of ARES, please contact Andy Gabbert KAØTUD 417-673-8371 after 5 PM.

been. Something will be changed one of these days, and the problem will go away. Of course a new one could show up!

As long as we are in such a rich RF environment, there will always be problems. A new site may not necessarily be better. ¶

BRUCE IS HAS BEEN INVOLVED WITH THE JARC TECHNICAL COMMITTEE FOR SEVERAL YEARS. HE SELECTED AND SET UP BOTH REPEATER TRANSCIEVERS, AND BUILT THE REMOTE CONTROL INTERFACE FOR THE MACHINE.

(Continued from page 3)

Former US Ambassador to Lebanon and Iran Armin Meyer, W3ACE, also recalled Hussein February 8 in a letter to The Washington Post. Meyer said JY1 "has for decades been promoting peace and good will among quite ordinary people." As Meyer put it: "For the king, ham radio was a different world, a community of diverse people."

All members of the Jordanian royal family automatically have Amateur Radio privileges in Jordan. Although the new king does not appear to have a call sign, King Hussein's widow--the American-born Queen Noor--is JY1NH. King Hussein's brother, the former Crown Prince Hassan, is JY2HT, while his cousin, Prince Raad, JY2RZ, is chairman of the Royal Jordanian Radio Amateur Society.

Jennifer Gagne, N1TDY, supplied information for this report

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(Continued from page 3)

by eight digits. They will not be available to those eligible to hold a Social Security Number. Alien licensees needing an assigned TIN should contact FCC Technical Support at 202-424-1250.

Prior to its latest filing, the ARRL had expressed concerns that the FCC might do away with paper license documents altogether and rely instead on the "license grant"--the virtual document that resides within the FCC's computerized amateur database. The League pointed out in its January petition that some states regulate possession of scanning receivers but exempt amateurs, and inability to produce a license document could result in "arrest and criminal prosecution as well as seizure of equipment by local law enforcement." The League said hams operating overseas also often must produce a paper document. The ARRL noted that the CEPT agreement requires US hams traveling in CEPT countries to possess a US government-issued license document and that ITU regulations "appear to require" a government-issued license document.

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HAMFEST CALENDAR

Note: Listings are updated as information becomes available.
Courtesy of Lonnie Allen NØTBO

March 13, 1999 Kansas City, MO
Ararat AR Shrine Club
Steve Dowdy, WJØI
12411 Olive St., Kansas City, MO 64146
816-941-3392 E-mail: sdowdy@qni.com

March 13, 1999 Fort Smith, Arkansas
Hamfest - Fort Smith Civic Center
For information: Kelsey Mikel - KK5KU
8604 Urban View Dr.
Fort Smith, AR. 72903
501-651-7003 E-mail: kk5ku@amsat.org

March 14, 1999 Crane, Missouri 65633
12:30 P. M. to 4:00 P. M.
Location: Stone County Senior Citizens
on Main Street Talk-in freq: 145.330 -
Tables \$5.00 - first come first serve basis.
E-mail NØTBO@gte.net

March 19-20, 1999 Tulsa, OK
Oklahoma State Convention - Tulsa, OK
Maxwell Convention Ctr - 7th & Houston
Talk-in: 145.11-, Tickets \$8 (\$10 at door)
Pre-registration cutoff March 6th.
Green Country Hamfest Association
P.O. Box 470132, Tulsa, OK 74147-0132
24 hour hotline: 918-622-2277
E-mail: info@GreenCountryHamfest.org

March 20, 1999 Jonesboro, Arkansas
Jonesboro Amateur Radio Club Hamfest
Craighead Fairgrounds-Corner of Stadium
& Highland across Fair Park Blvd.
Tables \$15, most with electric and chairs.
Open to Hams, Computer Hobbieists, and
Craft People. Hourly prizes.
Contact: Evelyn Castleberry, 932-1660

April 2-3, 1999 Mooreland, OK
Tri-State AR Group, Tulsa, OK
Green Country Hamfest Association
Duane Henderson, KC5NID
RR 1, Box 171, Mooreland, OK 73852
580-994-2223
E-mail: kc5nid@pldi.net

April 4, 1999 Crane, Missouri 65633
12:30 P. M. to 4:00 P. M.
Location: Stone County Senior Citizens
on Main Street Talk-in freq: 145.330 -
Tables \$5.00 - first come first serve basis.

Buy/Sell Trade

For Sale - Numerous Items - FT -107M
Complete set, with matching tuner (not automatic), external vfo, Transverter with 2m module, speaker. **Kenwood 2m FM rig**, early 80's model, **MFJ Versa Tuner 2**, also **Keyer** for hf gear.
\$800 or best offer
Brandon Farmer, KCØAJH
(417) 627-0730 or 626-0382

2/99

For Sale - MFJ 6m FM-SSB Transceiver
\$175
Ralph Orahood, KBØZHC (417) 358-7540

02/99

Wanted to Buy - Laptop Computer
486/66 or better, will consider trade for radio gear. Desire that the laptop have a modem, CDROM, and 16MB RAM.
Brandon Farmer, KCØAJH
(417) 627-0730 or 626-0382

2/99

Wanted - Communications Receivers and Transmitters (Esp. Hallicrafters)
Military Gear, AM Transmitters, Components and Junk.
Lloyd D. Williams, KAØZCX

1/99

For Sale - Realistic 202, 2m FM Handheld w/battery and charger
\$60.
Frank Guodace, NØLEG (417) 781-7933

1/99

For Sale - ICOM 290-A 2m All Mode Transceiver fine shape
\$275 OBO.
Ralph Orahood, KBØZHC (417) 358-7540

11/98

For Sale - Heath HW-24T Handheld VHF/UHF, Needs charger.
Ask \$200 Eric Gilbert (417) 623-2584

10/98

For Sale - 2 CushCraft DX-120 2m collinear beams. Each array 20 elements. Total 40 elements, with phasing harness.
Ask \$100
Jim Scott, WBØIYC (417) 781-2211

10/98

E-mail n0tbo@gte.net

April 17, 1999 Joplin, Missouri
The Joplin ARC presents HAMFEST '99
John Q. Hammons Trade Center
3615 Range Line, Exit 8B from I-44
Ray Brown, KBØSTN (417) 781-4967

MARCH 1999

Joplin Amateur Radio Club Meetings and Events

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
	1 19:30 JARC Mon NITE NET 147.21 MHz WØIN REPEATER	2	3	4 17:30 THURSDAY NITE OUT-	5	6 09:00 BREAKFAST-
7 14:30 -15:30 JARC SLOW SCAN NET	8 19:30 JARC Mon NITE NET 147.21 MHz WØIN REPEATER	9 19:30 JARC BUSINESS MEETING	10	11 17:30 THURSDAY NITE OUT-	12	13 09:00 BREAKFAST-
14 14:30 -15:30 JARC SLOW SCAN NET	15 19:30 JARC Mon NITE NET 147.21 MHz WØIN REPEATER	16	17	18 17:30 THURSDAY NITE OUT-	19	20 09:00 BREAKFAST-
21 14:30 -15:30 JARC SLOW SCAN NET	22 19:30 JARC Mon NITE NET 147.21 MHz WØIN REPEATER	23 19:30 JARC PROGRAM MEETING	24	25 17:30 THURSDAY NITE OUT-	26	27 09:00 BREAKFAST-
28 14:30 -15:30 JARC SLOW SCAN NET	29 19:30 JARC Mon NITE NET 147.21 MHz WØIN REPEATER	30	31	<p>Don't Forget! Meetings are at City Hall.</p>		

Meeting Times, Testing, Events, other Club Information

The Joplin Amateur Radio Club, Inc., a Missouri *not-for-profit* organization, meets on the second and fourth Tuesdays of each month at the Joplin Municipal Building, on the lower level, in the Civil Defense dining room at 7:30 PM. The facility is accessible to the handicapped.

The club supports and promotes annual operating events, assists area agencies with communications when requested, and offers training classes for advancement in amateur radio. It also sponsors the JARC HamFest each year in April, and maintains a wide area coverage OPEN 2m repeater on 147.21 MHz.

Club members often meet weekday mornings in Joplin for coffee at the Target Store (3151 East 7th St.)

around 8:30 a.m. Members also meet for breakfast on Saturday morning around 8:30 AM in the restaurant at Smitty's (18th and Maiden Lane) in Joplin.

1999 CLUB OFFICERS:

President: Ray	KBØSTN
Vice-Pres. Jackson	KBØWFE
Treasurer, Jim	NØZSQ
Secretary, Betty	KBØTKX

Amateur Radio VE Testing

License testing by volunteer examiners takes place on the 3rd Thursday of each month (except July & August) at St. Paul's Methodist Church located at 2423 West 26th St. in Joplin. Sign up at 6:30 PM, testing begins promptly at 7 PM.

ABOUT THE NEWSLETTER

This club newsletter provides an open forum for the Four-State area amateur radio community, and *your* comments and contributions are always invited. Items for publication, including classified ads and amateur radio related articles, may be sent to the **JARC Printed Circuit**, P.O. Box 2983, Joplin, MO 64803-2983, or send email to: jimscott@janics.com

Deadline for submissions is the 20th of the month preceding the month of publication. Non-Commercial Classified ads are free and will be run on a space available basis whenever requested. Submissions may be typed, handwritten, ASCII text files attached with email, or on disks formatted for IBM. *All items* are subject to editing for spelling, content, and space limitations as required. '73 and Thanks. **Jim WBØIYC ¶**

Last Page

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P.O. Box 2983
Joplin, Missouri 64803-2983